

Application No. 09/749,819
Draft Amendment

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): An image processing apparatus comprising:
a sensor board unit arranged to receive image data based an original image;
an arithmetic processing unit which processes said image data to create a reproduction
of said original image, being a digital signal prepared based on an image, as a manifest
image, said arithmetic processing unit including,
an arithmetic processing section of SIMD (Single Instruction Multiple Data stream)
type that can process a plurality of image data at the same time;
a plurality of memories connected to said arithmetic processing section; and
a memory controller which controls each of said memories, and
an image writing unit arranged to transfer said reproduction of said original image to a
document.
wherein said memory controller controls transfer of image data performed between
said memory and said arithmetic processing section.

Claim 2 (Original): The image processing apparatus according to claim 1, wherein
said memory controller is connected to a control register, and said control register has a data
transfer mode setting function for setting the data transfer mode of the memory connected to
the memory controller.

Claim 3 (Original): The image processing apparatus according to claim 2, wherein
said controller register changes over setting of a random access mode in which an address is
set to access the memory, and setting of an automatic access mode in which an address is
automatically updated to access the memory, in accordance with a control signal provided
from outside.

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Claim 4 (Original): The image processing apparatus according to claim 2, wherein said control register reads data redundantly from said memory, in accordance with a control signal provided from outside, and sets a redundant readout transfer mode for transferring data to said arithmetic processing section.

Claim 5 (Original): The image processing apparatus according to claim 2, wherein said control register reads data from said arithmetic processing section by thinning out, in accordance with a control signal provided from outside, and sets a thinning-out read transfer mode for transferring data to said memory.

Claim 6 (Currently Amended): An image processing apparatus comprising:
a sensor board unit arranged to receive image data based an original image;
an arithmetic processing means for processing said image data to create a
reproduction of said original image, being a digital signal prepared based on an image, as a
manifest image, said arithmetic processing means including,
an arithmetic processing section of SIMD (Single Instruction Multiple Data stream) type that can process a plurality of image data at the same time;
a plurality of memories connected to said arithmetic processing section; and
a memory controller for controlling each of said memories, and
an image writing unit arranged to transfer said reproduction of said original image to a
document,
wherein said memory controller controls transfer of image data performed between said memory and said arithmetic processing section.

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Claim 7 (Original): The image processing apparatus according to claim 6, wherein said memory controller is connected to a control register, and said control register has a data transfer mode setting function for setting the data transfer mode of the memory connected to the memory controller.

Claim 8 (Original): The image processing apparatus according to claim 7, wherein said controller register changes over setting of a random access mode in which an address is set to access the memory, and setting of an automatic access mode in which an address is automatically updated to access the memory, in accordance with a control signal provided from outside.

Claim 9 (Original): The image processing apparatus according to claim 7, wherein said control register reads data redundantly from said memory, in accordance with a control signal provided from outside, and sets a redundant readout transfer mode for transferring data to said arithmetic processing section.

Claim 10 (Original): The image processing apparatus according to claim 7, wherein said control register reads data from said arithmetic processing section by thinning out, in accordance with a control signal provided from outside, and sets a thinning-out read transfer mode for transferring data to said memory.

Claim 11 (Currently Amended): An image processing method to be executed by an image processing apparatus, said image processing apparatus including an SIMD type arithmetic processing section for processing a plurality of image data, being digital signals prepared based on an image, at the same time; a plurality of memories connected to said arithmetic processing section; and a memory controller for controlling each of said memories, the method comprising:

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receiving said image data from a sensor board unit arranged to receive image data
based an original image:

an image data control step for controlling transfer of image data, performed between
said memory and said arithmetic processing section, by said memory controller; and,
transferring a reproduction of said original image to a document.

Claim 12 (Original): The image processing method according to claim 11, wherein
said image data control step includes a data transfer mode setting step for setting data transfer
mode of memories connected to the memory controller.

Claim 13 (Original): The image processing method according to claim 11, wherein
said image data control step is for changing over setting of a random access mode in which
an address is set to access the memory, and setting of an automatic access mode in which an
address is automatically updated to access the memory, in accordance with a control signal
provided from outside.

Claim 14 (Original): The image processing method according to claim 11, wherein
said image data control step is for reading data redundantly from said memory, in accordance
with a control signal provided from outside, and setting a redundant readout transfer mode for
transferring the data to said arithmetic processing section.

Claim 15 (Original): The image processing method according to claim 11, wherein
said image data control step is for reading data from said arithmetic processing section by
thinning out, in accordance with a control signal provided from outside, and setting a
thinning-out read transfer mode for transferring the data to said memory.

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Claim 16 (Currently Amended): A computer readable medium for storing instructions, which when executed by a computer, causes the computer to perform an image processing method to be executed by an image processing apparatus, said image processing apparatus including an SIMD type arithmetic processing section for processing a plurality of image data, being digital signals prepared based on an image, at the same time; a plurality of memories connected to said arithmetic processing section; and a memory controller for controlling each of said memories, the method comprising:

receiving said image data from a sensor board unit arranged to receive image data based an original image;

an image data control step for controlling transfer of image data, performed between said memory and said arithmetic processing section, by said memory controller; and,

transferring a reproduction of said original image to a document.